

REMARKS

Applicant appreciates the time taken by the Examiner to review Applicant's present application. This application has been carefully reviewed in light of the Official Action mailed September 6, 2006. Applicant respectfully requests reconsideration and favorable action in this case.

Claim Status

Claims 1-25 were pending. Claims 1-25 were rejected. Claims 15, 17, 20 and 22 are amended herein. Support for the claim amendments can be found in the Specification as originally filed. In particular, support for the claim amendments can at least be found at pages 65-73. Claim 25 is cancelled. Thus, Claims 1-24 are now pending.

Claim Objections

Claim 25 was objected to as duplicating Claim 17.

Claim 25 has been cancelled. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 15, 17, 20, 22 and 25 were rejected as anticipated by U.S. Publication No. 2002/0175850 ("Barnes")

Claims 15, 17, 20, 22 and 25 were rejected as anticipated by U.S. Patent No. 5,960,031 ("Fullerton").

Claim 15 recites:

generating a receiving template signal for a received pulse signal wherein if the received pulse signal is a burst-mode signal, the magnitude of the autocorrelation approximates zero, wherein generating the receiving template signal comprises convoluting a template signal with a set of code sequence elements, each of the set of code sequence elements having a timing component and an amplitude component corresponding to the timing component and wherein the set of code sequence elements is substantially a replica of a code sequence used to produce the received pulse signal;  
correlating the receiving template signal with the received pulse signal; and  
decoding a detected signal, wherein the detected signal is produced by correlating the receiving template signal with the received pulse signal.

Claims 17, 20 and 22 recite similar limitations. Thus, embodiments of the present invention provide a method for receiving and demodulating a burst-mode signal such that the autocorrelation will approximate zero. In embodiments of the invention, a burst mode signal is a signal which has heightened throughput. This can be accomplished by compressing the spacing between pulses in a pulse train. (See Specification, page 64, lines 4-20.) Compressing the spacing between pulses may degrade performance because of inter-symbol interference. This inter-symbol interference may be due to multipath effects. (See Specification, page 73, lines 1-10.) The above-described degradation in performance can be minimized by generating a receiving template signal which results in an autocorrelation which has a magnitude which approximates zero. (See Specification, page 72, lines 5-20.)

Applicant respectfully submits that the cited portions of Barnes and Fullerton do not teach burst mode signals as taught by the present invention. Applicant further submits that Barnes and Fullerton do not teach generating a receiving template signal such that the autocorrelation associated with a burst mode signal will approximate zero, thus optimizing burst mode operation by reducing the deleterious effects of inter-symbol interference.

Therefore, because Barnes and Fullerton do not disclose at least the limitations of a burst mode signal and generating a receiving template signal which results in an autocorrelation which approximates zero when used with a burst mode signal recited by Claim 15, Claim 15 is novel in light of both Barnes and Fullerton. For similar reasons, Applicant respectfully submits that Claims 17, 20 and 22 are novel in light of Barnes and Fullerton. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 16, 18, 19, 21, 23 and 24 were rejected as obvious over U.S. Patent No. 5,960,031 ("Fullerton") in view of U.S. Patent No. 5,974,082 ("Ishikawa").

Claims 16, 18, 19, 21, 23 and 24 depend from independent claims discussed above: Applicant respectfully submits that Ishikawa does not remedy the deficiencies of Fullerton. Consequently, Applicant submits that Claims 16, 18, 19, 21, 23 and 24 are nonobvious in light of the cited prior art. Accordingly, withdrawal of this rejection is respectfully requested.

CONCLUSION

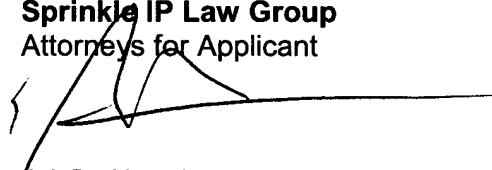
Applicant respectfully requests that the Examiner withdraw his rejections of Claims 15, 17, 20, 22 and the respective dependant claims. Applicant has now made an earnest attempt to place this case in condition for allowance. Other than as explicitly set forth above, this reply does not include an acquiescence to statements, assertions, assumptions, conclusions, or any combination thereof in the Office Action. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1-24. The Examiner is invited to telephone the undersigned at the number listed below for prompt action in the event any issues remain.

An extension of two (2) months is requested and a Notification of Extension of Time Under 37 C.F.R. § 1.136 with the appropriate fee is enclosed herewith.

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-3183 of Sprinkle IP Law Group.

Respectfully submitted,

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